

General

Title

Potentially avoidable mortality: total number of premature deaths that could potentially have been avoided through all levels of prevention per 100,000 population.

Source(s)

Canadian Institute for Health Information (CIHI). Indicator metadata: avoidable deaths. [internet]. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2014 Sep [accessed 2015 Jul 13].

Measure Domain

Primary Measure Domain

Related Population Health Measures: Population Health State

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the total number of premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary) per 100,000 population younger than age 75 (potentially avoidable mortality).

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care, including prevention. It serves to focus attention on the portion of population health attainment that can potentially be influenced by the health system.

Calculation Description

Mortality rate: $(\text{Number of deaths at age younger than 75 from avoidable causes} \div \text{Total mid-year population younger than age 75}) \times 100,000$ (age-adjusted)

Potential years of life lost (PYLL): $(\text{The sum of differences between 75 and age of death from avoidable causes} \div \text{Total mid-year population younger than age 75}) \times 100,000$ (age-adjusted)

Rationale

Avoidable mortality indicators provide additional insight into the Canadian health system. These measures can be used to assess the impact of prevention strategies and the outcomes of health policy decisions and health care provision.

Avoidable mortality indicators can serve to inform where Canada's health system has made gains and to point to where more work is needed. They can also help to quantify potential gains. For example, in an ideal world where all avoidable mortality in Canada has been eliminated, life expectancy at birth for the years 2006 to 2008 would have been 85.8 years—4.9 years longer than the actual life expectancy of 80.9 years. Three of the 4.9 years would be attributed to eliminating preventable mortality; the other 1.9 years would come from eliminating mortality from treatable causes.

Analysis of avoidable mortality highlights the need for prevention.

Evidence for Rationale

Australian Government. National Healthcare Agreement: PI 20-Potentially Avoidable Deaths, 2010. [internet]. 2011 Jun 8 [accessed 2011 Oct 19].

Canadian Institute for Health Information (CIHI). Indicator metadata: avoidable deaths. [internet]. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2014 Sep [accessed 2015 Jul 13].

Ministry of Health. Saving lives: amenable mortality in New Zealand, 1996-2006. Wellington (New Zealand): Ministry of Health; 2010.

Nolte E, McKee CM. Does health care save lives? Avoidable mortality revisited. London (UK): The Nuffield Trust; 2004.

Office for National Statistics. Avoidable mortality in England and Wales, 2010. 2012 May 15. 21 p.

Page A, Tobias M, Wright C, et al. Australian and New Zealand atlas of avoidable mortality. Adelaide (Australia): PHIDU, University of Adelaide; 2006.

Rutstein DD, Berenberg W, Chalmers TC, Child CG 3rd, Fishman AP, Perrin EB. Measuring the quality of medical care. A clinical method. N Engl J Med. 1976 Mar 11;294(11):582-8. [PubMed](#)

Primary Health Components

Avoidable mortality; premature deaths

Denominator Description

Total mid-year population younger than age 75

Numerator Description

Number of deaths at age younger than 75 from avoidable causes (treatable or preventable) (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

National Public Health Programs

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Regional, County or City

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Age less than 75 years

Target Population Gender

Either male or female

National Framework for Public Health Quality

Public Health Aims for Quality

Population-centered

Risk Reducing

Transparency

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

January to December

Denominator Sampling Frame

Geographically defined

Denominator (Index) Event or Characteristic

Geographic Location

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Total mid-year population younger than age 75

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of deaths at age younger than 75 from avoidable causes (treatable or preventable)

Note:

Expressed as the age-standardized mortality rate and age-standardized potential years of life lost (PYLL) per 100,000 population.
Potential years of life lost (PYLL): The sum of differences between age 75 and age of death from avoidable causes (treatable or preventable).

Refer to the original measure documentation for the list of avoidable causes.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

National public health data

Type of Health State

Death

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

- Indicators are reported at the national, provincial/territorial, and regional levels.
- Unless otherwise specified, for indicators based on place of residence, data is reported based on the region of the patient's residence, not region of hospitalization. Consequently, these figures reflect the hospitalization experience of residents of the region wherever they are treated, including out of province, as opposed to the comprehensive activity of the region's hospitals (that will also treat people from outside of the region). Hospitalizations occurring in the U.S. or abroad are not included.
- For indicators based on place of service (where the patient was treated), data is reported based on the administrative region of the facility (e.g., region of hospitalization).
- Rates are standardized or risk-adjusted wherever possible to facilitate comparability across provinces/regions/facilities and over time.
- Standardized rates are adjusted by age (collapsed to five-year groupings) using a direct method of standardization based on the July 1, 1991, Canadian population.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Avoidable deaths.

Measure Collection Name

Health Indicators ePublication 2015

Submitter

Canadian Institute for Health Information - Nonprofit Organization

Developer

Canadian Institute for Health Information - Nonprofit Organization

Funding Source(s)

Canadian Government

Composition of the Group that Developed the Measure

Employees: Canadian Institute for Health Information (CIHI) Health Indicators and Statistics Canada

Financial Disclosures/Other Potential Conflicts of Interest

None

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2014 Sep

Measure Maintenance

Annually

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: Canadian Institute for Health Information (CIHI). Health indicators 2013: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2013 May. 89 p.

The measure developer reaffirmed the currency of this measure in April 2016.

Measure Availability

Source available from the [Canadian Institute for Health Information \(CIHI\) Web site](#)

For more information, contact CIHI at 4110 Yonge Street, Suite 300, Toronto, Ontario, Canada, M2P 2B7; Phone: 416-481-2002; Fax: 416-481-2950; E-mail: hsp@cihi.ca; Web site: www.cihi.ca

Companion Documents

The following are available:

Canadian Institute for Health Information (CIHI). Indicator library: general methodology notes - clinical indicators, March 2015. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2015 Mar. 19 p. This document is available from the [Canadian Institute for Health Information \(CIHI\) Web site](#) .

Canadian Institute for Health Information (CIHI). Canadian coding standards for version 2015 ICD-10-CA and CCI. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2015. 511 p. This document is available from the [CIHI Web site](#) .

Canadian Institute for Health Information (CIHI). Health indicators interactive tool. [internet]. Ottawa (ON): Canadian Institute for Health Information (CIHI); [accessed 2015 Jan 20]. This tool is available from the [CIHI Web site](#) .

NQMC Status

This NQMC summary was completed by ECRI Institute on March 18, 2013. The information was verified by the measure developer on May 17, 2013.

The CIHI informed NQMC that this measure was updated on October 31, 2013 and provided an updated version of the NQMC summary. This NQMC summary was reviewed and updated accordingly by ECRI Institute on February 21, 2014.

This NQMC summary was updated again by ECRI Institute on September 4, 2015. The information was verified by the measure developer on November 6, 2015.

The information was reaffirmed by the measure developer on April 29, 2016.

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Questions and inquiries may be directed to: CIHI, Health Indicators, 4110 Yonge Street, Suite 300, Toronto, Ontario, Canada, M2P 2B7; Phone: 416-481-2002; Fax: 416-481-2950.

Production

Source(s)

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